BEYOND AI ERA

KNOWLEDGE BASE OS

V1 - 700-page backend, SEO, AI and dashboard architecture

A dense applied blueprint for building a lovable, AI-powered intelligence consultant that reads agentic AI trends, evolves a knowledge base, creates three daily blogs, links products and services, visualizes knowledge in 3D, and feeds natural SEO growth through GSC intelligence.



Service layer: $60 Initial System Pilot | Brand voice: scientific hope, agentic evolution, semantic growth

Prepared for BEYOND AI ERA / Zouhair Moussaif

002. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

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GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

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DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

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DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

006. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL
Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL
Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

007. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL
Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL
Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

008. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

009. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL
Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL
Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL
Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

010. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

011. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

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012. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

013. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

014. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

015. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

016. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

017. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

018. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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019. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SECURITY GUARDRAIL

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020. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

021. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

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GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

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BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

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FAILURE MODE

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DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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022. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

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Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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NEXT ITERATION

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023. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

024. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

025. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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INTERNAL LINK RULE
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BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL
Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL
Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

026. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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QUALITY COURT

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SEO RULE

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

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027. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

028. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

029. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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030. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

031. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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032. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

033. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

034. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

035. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

036. Strategic Positioning

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

BEYOND AI ERA must be positioned as a living knowledge infrastructure company: books, AI systems, agentic dashboards, and guided implementation, not a generic AI blog. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

037. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

038. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

039. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

040. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

041. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

042. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

043. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

044. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

045. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL
Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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DEFINITION
The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL
Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
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NEXT ITERATION
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DEFINITION
The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL
Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
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DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

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DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

049. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

050. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

051. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

052. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

053. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

054. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

055. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

056. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

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057. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

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GSC FEEDBACK

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BOOK/SERVICE BRIDGE

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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058. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

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GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

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Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

060. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

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GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

061. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

062. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

063. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL
Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

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ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL
Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL
Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

064. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

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DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

065. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

066. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

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067. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

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The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

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068. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

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ACCEPTANCE TEST

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The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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EDGE FUNCTION LOGIC

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SEO RULE

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GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

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Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

069. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

070. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

071. Lovable Backend Architecture

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The build should use Lovable Cloud or Supabase-style primitives: PostgreSQL, auth, storage, realtime, edge functions, jobs, secrets, logs, and server-side AI calls. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

072. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

073. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

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074. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

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ACCEPTANCE TEST

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

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DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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075. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

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INTERNAL LINK RULE

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

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GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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NEXT ITERATION

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076. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

077. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

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GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

078. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

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Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

079. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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BOOK/SERVICE BRIDGE

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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GSC FEEDBACK

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

080. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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DEFINITION

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LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

081. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

082. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

083. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

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GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

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084. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

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Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

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EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

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MCAI LOOP

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

085. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

086. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

087. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

088. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

089. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

090. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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3D GRAPH BEHAVIOR

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091. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

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GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

092. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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093. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

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Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

094. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

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Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

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Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

095. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

096. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

097. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

098. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

099. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL
Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL
Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

100. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

101. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

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GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

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DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

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DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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102. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

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MCAI LOOP

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QUALITY COURT

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SEO RULE

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GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

104. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

105. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

106. Source Intelligence Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The source layer reads official docs, RSS feeds, GitHub public metadata, arXiv abstracts, Google Search Central updates, and selected AI agentic market sources. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

107. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

108. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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109. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

110. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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111. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

112. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

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SEO RULE

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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113. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

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Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

114. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

115. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

116. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

117. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

118. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

119. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

120. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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121. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

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DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

122. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

123. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

124. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

125. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

126. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

127. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

128. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

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GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

129. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

130. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

131. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

132. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

133. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL
Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL
Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
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MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL
Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

134. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

135. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

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136. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

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The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

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AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

137. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

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138. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

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139. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

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DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

140. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

141. Agentic Market Radar

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The radar scores agentic AI trends by velocity, novelty, implementation maturity, commercial value, scientific depth, and fit with BEYOND AI ERA products. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

142. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

143. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

144. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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GSC FEEDBACK

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3D GRAPH BEHAVIOR

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145. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

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GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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146. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

147. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL
Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
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MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL
Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

148. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

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Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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QUALITY COURT

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Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

149. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

150. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

151. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

MCAI LOOP

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SEO RULE

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GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

152. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

153. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL
Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL
Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL
Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

154. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

155. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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156. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

157. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

158. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

159. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

160. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

161. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

162. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

163. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

164. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

165. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

166. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

167. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

168. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

169. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL
Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL
Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

170. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

171. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL
Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL
Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL
Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

172. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

173. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

174. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

175. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

176. Knowledge Base Evolution

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

External signals become versioned KB cards with definitions, evidence, implications, objections, internal links, and future content recommendations. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

177. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

178. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

179. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

180. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

181. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

182. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

183. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

184. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

185. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

186. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

187. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

188. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

189. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

190. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

191. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

192. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

193. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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194. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

195. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

196. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

197. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

198. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

199. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

200. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

201. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

202. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

203. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

204. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

205. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

206. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

207. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL
Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL
Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

208. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

209. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

210. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

211. MCD/QMCD Cognitive Scoring

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, Noise, then display the score transparently. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Score every trend through Difference, Integration, Transferability, Agency, Proof, Compression, and Noise, then display the score transparently. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

212. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

213. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

214. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

215. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

216. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

217. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

218. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

219. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

220. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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QUALITY COURT

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SEO RULE

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GSC FEEDBACK

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

221. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

222. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

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GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

223. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

224. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

225. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

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DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

226. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

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DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

227. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

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BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

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228. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

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FAILURE MODE

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Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

229. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

230. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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231. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

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GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

232. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

233. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

234. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

235. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

236. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

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GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

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INTERNAL LINK RULE

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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GSC FEEDBACK

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

237. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

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ACCEPTANCE TEST

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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NEXT ITERATION

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DEFINITION

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DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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EDGE FUNCTION LOGIC

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DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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238. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

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AI PROMPT CONTRACT

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

239. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

240. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

241. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

242. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

243. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL
Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL
Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL
Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

244. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

245. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

246. MCAI Processing Loop

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each output passes through extract difference, map complexity, route compute, generate alternatives, attack assumptions, repair weaknesses, test world-effect, and update memory. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

247. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

248. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

249. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

250. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

251. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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BOOK/SERVICE BRIDGE

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252. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

253. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

254. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

255. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

256. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

257. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

258. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

259. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

260. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

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DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

261. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

262. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

263. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

264. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

265. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

266. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

267. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

268. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

269. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

270. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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QUALITY COURT

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AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

271. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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272. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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BOOK/SERVICE BRIDGE

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

273. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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ACCEPTANCE TEST

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

274. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

275. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

276. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

277. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

278. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

279. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

280. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

281. Quality Court

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

The Quality Court rejects unsupported claims, thin summaries, generic hype, forced selling, copied wording, weak examples, and SEO manipulation. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

282. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

283. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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QUALITY COURT

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284. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

285. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

286. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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MCAI LOOP

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

287. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

288. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

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289. Blog Factory

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DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

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SEO RULE

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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ACCEPTANCE TEST

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290. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

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Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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ACCEPTANCE TEST

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

291. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

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DASHBOARD UX

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

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DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

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DASHBOARD UX

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292. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

293. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

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3D GRAPH BEHAVIOR

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294. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

295. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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GSC FEEDBACK
Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
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ACCEPTANCE TEST
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FAILURE MODE
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NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL
Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL
Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

296. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

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DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

297. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

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GSC FEEDBACK

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

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Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

299. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

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ACCEPTANCE TEST

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DEFINITION

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DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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301. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

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302. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

303. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

304. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

305. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

DASHBOARD UX

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

306. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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307. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

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GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

308. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

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Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

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Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

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EDGE FUNCTION LOGIC

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DASHBOARD UX

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309. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

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BOOK/SERVICE BRIDGE

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

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DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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310. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

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NEXT ITERATION

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DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

311. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

312. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

313. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

314. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

315. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

316. Blog Factory

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate three daily draft blogs from top trend clusters, but keep human review and quality scoring before publication. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

317. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

318. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

319. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

320. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

321. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

322. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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AI PROMPT CONTRACT

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MCAI LOOP

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SEO RULE

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GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

323. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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GSC FEEDBACK

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INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

324. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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325. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

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ACCEPTANCE TEST

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

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DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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EDGE FUNCTION LOGIC

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DASHBOARD UX

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

326. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

327. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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328. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

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AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

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ACCEPTANCE TEST

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FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

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FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

329. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

330. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

331. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

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GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

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DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

332. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

333. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

334. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

335. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

337. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

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338. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

339. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

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Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

340. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

341. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

342. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

343. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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344. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

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GSC FEEDBACK

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INTERNAL LINK RULE

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

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GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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345. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

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346. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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LOVABLE BUILD TASK

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

347. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

348. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

349. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

350. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

351. GSC Intelligence

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Search Console data becomes a feedback stream that drives refreshes, internal links, book CTAs, sitemap checks, and content priorities. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

352. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

353. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

354. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

355. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

356. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

357. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

358. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

359. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

360. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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361. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

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362. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

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EDGE FUNCTION LOGIC

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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ACCEPTANCE TEST

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363. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

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GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

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BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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DASHBOARD UX

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AI PROMPT CONTRACT

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364. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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365. Sitemap Discipline

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DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

366. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

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GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

367. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

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SEO RULE

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GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

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DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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SECURITY GUARDRAIL

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

368. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

369. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

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GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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ACCEPTANCE TEST

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

370. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

371. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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372. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

373. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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374. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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375. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

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GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

376. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

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Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

377. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

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QUALITY COURT

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SEO RULE

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GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

378. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

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QUALITY COURT

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SEO RULE

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GSC FEEDBACK

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INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

379. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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380. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

381. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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EDGE FUNCTION LOGIC

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382. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

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DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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383. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

384. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

385. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

386. Sitemap Discipline

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Generate sitemap indexes, add a robots.txt sitemap line, submit sitemaps through Search Console API, and avoid deprecated ping workflows. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

387. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

388. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

389. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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390. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

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Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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391. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

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SEO RULE

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GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

392. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

393. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

394. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

395. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

396. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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397. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

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MCAI LOOP

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

398. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

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INTERNAL LINK RULE

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3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

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399. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

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AI PROMPT CONTRACT

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ACCEPTANCE TEST

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

400. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

401. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

402. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

403. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

404. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

405. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

406. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

407. Hreflang SEO

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

408. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

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409. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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SEO RULE

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GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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410. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

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FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

411. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

412. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

413. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

414. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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415. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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SEO RULE

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GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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416. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

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DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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417. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

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DATA MODEL

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LOVABLE BUILD TASK

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

418. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

419. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

420. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

421. Hreflang SEO

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Keep /en/blog, /fr/blog, /ar/blog separated and connect language variants through hreflang groups and x-default when needed. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

422. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

423. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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ACCEPTANCE TEST

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

424. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

425. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

426. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

427. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

428. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

429. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

430. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

431. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

432. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

433. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

434. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

435. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

436. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

437. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

438. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

439. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP
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GSC FEEDBACK
Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
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BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
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NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL
Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE
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GSC FEEDBACK
Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL
Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

440. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

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DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

441. Ebook Semantic Hub

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NEXT ITERATION
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DEFINITION
Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL
Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL
Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

442. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

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AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

443. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

444. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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445. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

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446. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

447. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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SEO RULE

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GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

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448. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

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LOVABLE BUILD TASK

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EDGE FUNCTION LOGIC

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DASHBOARD UX

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

449. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

450. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

451. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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SEO RULE

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GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

452. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

453. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

454. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

455. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

456. Ebook Semantic Hub

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Each ebook needs a semantic profile, related blog list, target reader, conversion CTA, and GSC-demand bridge. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

457. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

458. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

459. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

460. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

461. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

462. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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463. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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464. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

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Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

465. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SECURITY GUARDRAIL

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466. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

467. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

468. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

469. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

470. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

471. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

472. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

473. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

474. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

475. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

476. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

477. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

478. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

479. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

480. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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MCAI LOOP

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481. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

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Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

482. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

483. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

484. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

485. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

486. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

487. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

488. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

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SEO RULE

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

489. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

490. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

491. AI Systems Service Layer

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Add the $60 Initial System Pilot as an entry service linked from blogs, ebooks, service pages, and relevant search-demand clusters. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

492. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

493. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

494. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

495. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

496. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

497. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

498. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

499. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

500. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

501. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

502. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

503. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

504. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

505. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

506. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

507. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

508. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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509. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

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ACCEPTANCE TEST

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FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

510. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

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INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, services, and actions as high-performance nodes with filters and operational actions. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

511. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

512. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

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SEO RULE

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GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

513. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

514. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

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ACCEPTANCE TEST

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

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DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

515. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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516. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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ACCEPTANCE TEST

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

517. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

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Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

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SECURITY GUARDRAIL

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DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

519. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

520. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

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521. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

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DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

522. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

523. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

524. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

525. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

526. 3D Knowledge Graph

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Represent sources, trends, KB cards, blogs, ebooks, queries, and services as high-performance nodes with filters and operational actions. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

527. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

528. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

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GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

529. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

530. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

531. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

532. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

533. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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534. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

535. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

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Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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536. Metrics Lab

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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537. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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539. Metrics Lab

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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541. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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LOVABLE BUILD TASK

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Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

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Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

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DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SECURITY GUARDRAIL

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542. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

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Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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544. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

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545. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

546. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

MCD/QMCD SCORE

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DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

547. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

548. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

549. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

550. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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552. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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553. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

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DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

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Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

555. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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SEO RULE

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

556. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

557. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

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558. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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MCAI LOOP

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Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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559. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

DATA MODEL

Primary table focus: kb_cards. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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SEO RULE

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GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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BOOK/SERVICE BRIDGE

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

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DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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560. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

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EDGE FUNCTION LOGIC

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DASHBOARD UX

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AI PROMPT CONTRACT

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GSC FEEDBACK

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ACCEPTANCE TEST

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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561. Metrics Lab

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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DASHBOARD UX

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AI PROMPT CONTRACT

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Create original metrics such as Knowledge Freshness Half-Life, Agentic Opportunity Delta, Query Intent Drift Vector, and Revenue Knowledge Resonance. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

562. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

563. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

564. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

565. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

566. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

567. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

568. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

569. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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570. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

571. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

572. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

573. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

574. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

575. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

576. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

577. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

578. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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SEO RULE

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GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

579. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

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GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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SEO RULE

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GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

580. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

581. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

582. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

583. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

584. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

585. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

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Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

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587. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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QUALITY COURT

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SEO RULE

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GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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DASHBOARD UX

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DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

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DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

589. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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590. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

591. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

592. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

593. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

594. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

595. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

596. Security Governance

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Use RLS, backend secrets, webhook validation, role-based access, logs, audit trails, source ethics, and safe publication status. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

597. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

598. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

599. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

600. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

601. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

602. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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GSC FEEDBACK

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INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

603. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

604. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

605. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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606. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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607. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

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608. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

610. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

611. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

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GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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MCAI LOOP

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

612. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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613. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

614. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

615. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

616. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

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617. Operational Playbooks

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

618. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

619. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

620. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

621. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

622. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

623. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

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BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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624. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

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DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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EDGE FUNCTION LOGIC

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

625. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

626. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

627. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to deduplicate by canonical URL and semantic hash. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

628. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

629. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

630. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

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GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

631. Operational Playbooks

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: cluster_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ebooks. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Semantic Demand Echo = query-page-book mismatch that reveals where a blog should link to an ebook or AI system. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Daily ingestion, weekly quality review, monthly decay audit, sitemap health checks, source quality audits, and conversion experiments must be scheduled. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: source_items. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

632. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

633. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

634. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

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Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

635. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

636. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

637. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

638. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

639. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL
Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL
Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

640. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK
Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL
Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL
Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL
Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

641. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

642. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

643. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

644. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

645. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to generate three high-quality blogs after review. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

646. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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MCD/QMCD SCORE

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MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

647. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

648. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

649. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: ai_systems. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

650. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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SEO RULE

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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651. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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GSC FEEDBACK
Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
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3D GRAPH BEHAVIOR
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ACCEPTANCE TEST
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FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL
Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
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MCAI LOOP
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Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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GSC FEEDBACK
Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL
Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

652. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

653. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

654. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

655. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL
Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL
Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

656. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

657. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL
Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL
Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

658. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

659. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

660. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

661. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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662. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

663. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

LOVABLE BUILD TASK

Ask Lovable to submit sitemap through supported API paths. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Revenue Knowledge Resonance = probability that a topic can convert into ebooks, AI systems, or the $60 pilot call. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: gsc_daily_metrics. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

664. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

665. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

666. Publishing Workflow

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: internal_links. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Draft, enrich, review, approve, publish, update sitemap, submit through allowed API, inspect URL status, and watch GSC feedback. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: prompt_runs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Natural Growth Integrity Index = evidence, originality, engagement, internal links, and anti-spam discipline in one score. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

667. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: seo_actions. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

668. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

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GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

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BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

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EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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669. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

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Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

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670. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

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GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

671. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

GSC FEEDBACK

Metric connection: Knowledge Freshness Half-Life = days until freshness-weighted impressions lose half their strength; refresh before authority decays. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

672. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

673. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL
Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL
Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

674. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

675. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL
Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE
Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP
Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT
Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE
Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK
Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE
Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE
Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR
Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL
Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST
Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE
Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION
Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION
Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL
Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK
Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC
Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX
Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT
Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

676. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

GSC FEEDBACK

Metric connection: Agentic Opportunity Delta = market velocity minus current BEYOND AI ERA site coverage. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

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Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

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678. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

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Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

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ACCEPTANCE TEST

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DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: gsc_inspections. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to inspect canonical and robots states. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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680. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

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SEO RULE

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GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

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DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

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GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

681. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

ACCEPTANCE TEST

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

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INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

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682. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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LOVABLE BUILD TASK

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Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

683. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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684. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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685. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DATA MODEL

Primary table focus: system_jobs. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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686. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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SEO RULE

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GSC FEEDBACK

Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

687. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

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Metric connection: Crawl Readiness Pulse = sitemap, canonical, robots, URL inspection, lastmod, and internal depth combined. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

688. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

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GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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BOOK/SERVICE BRIDGE

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

689. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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MCAI LOOP

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

690. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCD/QMCD SCORE

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Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

691. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

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Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

692. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

693. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Book-to-Blog Authority Bridge = estimated internal authority transfer from a performing blog to a relevant book/service page. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

694. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive QA | revenue bridge

GSC FEEDBACK

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INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

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QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

695. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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696. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

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DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Every job must be observable: started, finished, failed, retried, skipped, cost estimate, source count, generated assets, and next suggested action.

DATA MODEL

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LOVABLE BUILD TASK

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EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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SEO RULE

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GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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697. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

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DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The Quality Court must attack the output before users see it: unsupported claims, generic language, missing examples, weak CTA fit, duplicate pages, and thin SEO risk.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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QUALITY COURT

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SEO RULE

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

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DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Natural SEO growth emerges when search demand, internal knowledge, and product usefulness meet inside one coherent architecture.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

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DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

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Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

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Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

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Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

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MCAI LOOP

Extract the active difference, map complexity, route compute, generate alternatives, attack assumptions, repair the output, test world-effect, and update memory.

QUALITY COURT

Reject if generic, unsupported, copied, too vague, too technical without explanation, too salesy, missing internal relation, or unsafe for natural SEO growth.

SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

698. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Scientific hope means clarity without hype: explain the future, the limitation, the practical step, and the beginner path with confidence but not exaggeration.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

Calculate Difference, Integration, Transferability, Agency, Proof, Compression, Noise. Explain each score and avoid hiding weak evidence behind a beautiful number.

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SEO RULE

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GSC FEEDBACK

Metric connection: Trend-to-Page Latency = time between first trend detection and first useful published page; lower is stronger. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

INTERNAL LINK RULE

Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

Protect secrets, use RLS, validate inputs, require admin roles for publish and GSC actions, rate-limit ingestion, and store audit logs for every job.

ACCEPTANCE TEST

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to route AI calls through backend edge functions. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

DATA MODEL

Primary table focus: quality_reviews. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to log job status and AI costs. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

Show this module as a card, table, drill-down page, timeline, and 3D node. The admin should understand status, cause, confidence, and next action in one glance.

AI PROMPT CONTRACT

Output contract: summary, claims, evidence_urls, objections, quality_flags, internal_link_targets, book_targets, service_targets, score_explanation, and recommended_action.

MCD/QMCD SCORE

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SEO RULE

Use canonical URLs, language-specific routes, clean slugs, structured data, sitemap lastmod, internal anchors, noindex drafts, and human approval before public indexing.

GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

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ACCEPTANCE TEST

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FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. When the AI generates content, it must return structured outputs: title, summary, claims, evidence URLs, objections, quality flags, internal link targets, and publishing recommendation.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

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GSC FEEDBACK

Metric connection: Query Intent Drift Vector = movement from informational language toward setup, pricing, implementation, and buying intent. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

699. Natural SEO Growth

V1 Knowledge Base OS | Lovable backend | GSC feedback | 3D graph | cognitive OA | revenue bridge

ACCEPTANCE TEST

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FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The 3D graph should make operational questions visible: which source created which trend, which trend generated which blog, which blog supports which ebook, and which query proves demand.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

DASHBOARD UX

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Create links only when helpful. Anchor text must match reader intent and semantic fit. Prefer book/service links when GSC queries reveal real demand.

BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

Create node types for sources, trends, KB cards, blogs, ebooks, queries, services, and actions. Animate knowledge flow with a 60 FPS target and low-power fallback.

SECURITY GUARDRAIL

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Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. The system should prefer fewer excellent pages over many weak pages. Every page must prove usefulness through evidence, practical steps, internal relevance, and a clear reader path.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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GSC FEEDBACK

Metric connection: Scientific Hope Signal = useful constructive insight divided by generic hype; keeps the voice strong and credible. Show raw fields, formula, confidence, trend direction, and action. Do not claim Google provides synthetic metrics directly.

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3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

Test by running a source import, generating one KB card, drafting one blog, linking one ebook, updating sitemap, reading GSC mock data, and seeing nodes appear in 3D.

FAILURE MODE

Failure risks: stale source, duplicate trend, hallucinated citation, low-value blog, wrong canonical, weak hreflang, API quota, exposed secret, or forced conversion link.

NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. Use JSONB for flexible evidence and scoring explanations, but keep important status, slug, date, source, page, and relation fields relational for fast dashboards.

DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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700. Natural SEO Growth

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FAILURE MODE

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. If GSC data contradicts the assumed opportunity, the system must revise the KB card and reduce confidence rather than forcing a marketing conclusion.

DATA MODEL

Primary table focus: trend_clusters. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to create tables with RLS and indexes. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

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BOOK/SERVICE BRIDGE

Relate the topic to ebooks, Knowledge Base OS, AI systems, and the $60 Initial System Pilot only when the reader gains a clear next step.

3D GRAPH BEHAVIOR

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SECURITY GUARDRAIL

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ACCEPTANCE TEST

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NEXT ITERATION

Next iteration: add better source scoring, cost control, multilingual editorial review, stronger schema validation, and source-specific trust calibration.

DEFINITION

Pages are created when a real knowledge gap, source-backed trend, reader need, and internal asset relation exist. This is an applied engineering rule, not decoration. The admin must see what changed, why it matters, which evidence supports it, what risks remain, and what action should happen next.

DATA MODEL

Primary table focus: blog_posts. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

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DATA MODEL

Primary table focus: sources. Add id, slug or key, status, timestamps, source references, confidence fields, JSONB evidence, and relational indexes for dashboard speed.

LOVABLE BUILD TASK

Ask Lovable to prevent noindex drafts from public sitemap. The result must include UI, backend function, database state, error handling, and a visible admin control.

EDGE FUNCTION LOGIC

Run sensitive work server-side: source fetch, GSC calls, sitemap submission, AI generation, webhooks, scoring, and scheduled jobs. Return structured JSON and log every failure.

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